

# 10910DMS 370500 醫學遺傳學

## Medical Genetics

任課教師: 黃貞祥、周裕珽

Time: T3T4 (星期二 10:10-12:00)

Room: LSII R217 生命科學二館 217 教室

### 一、課程說明(Course Description)

In addition to the basic introduction of human genetics, the most updated scientific and technical advance in human genetics will be included. The class will cover the basic genetic rules with emphasis on medical applications. The lectures will include genetic testing, screening, approaches to therapy, personalized medicine, disease models, comparative genomics, model organisms, and epigenetics.

二、指定用書 Human Heredity Principles and Issues. 10th/9th ed. M. Cummings 2014/2011

### 三、參考書籍

Emery and Rimoin's Principles and Practice of Medical Genetics (2013)

A large collection of related genetics textbooks will be deposited in the Lifescience 文念慈 library. 其他參考文章，PDF 檔將置放於 iLMS 數位學習平台。

### 四、教學方式

按教課書講授課為主

### 五、教學進度(Syllabus)

| Week | Date  | Topic                                     | Chapter    | Instructor |
|------|-------|---|------------|------------|
| 1    | 9/14  | Introduction and Cells                    | Ch 1 and 2 | 黃貞祥        |
| 2    | 9/21  | 中秋節假日                                     |            |            |
| 3    | 9/28  | 教師節停課                                     |            |            |
| 4    | 10/5  | Transmission genetics & Pedigree analysis | Ch 3, 4    | 黃貞祥        |
| 5    | 10/12 | Complex traits                            | Ch 5       | 黃貞祥        |
| 6    | 10/19 | Cytogenetics                              | Ch 6       | 黃貞祥        |

|    |       |   |                |     |
|----|-------|---|----------------|-----|
| 7  | 10/26 | Development and sex determination                       | Ch 7           | 黃貞祥 |
| 8  | 11/2  | Genetics of Behavior                                    | Ch 18          | 黃貞祥 |
| 9  | 11/9  | Population Genetics and human evolution                 | Ch 19          | 黃貞祥 |
| 10 | 11/16 | 期中考試  | Ch 1-7, 18 &19 | 黃貞祥 |
| 11 | 11/23 | Nucleic acid and chromatin & Gene expression            | Ch 8, 9        | 周裕琹 |
| 12 | 11/30 | Gene expression & Proteins to phenotypes                | Ch 9, 10       | 周裕琹 |
| 13 | 12/7  | Mutation  | Ch11           | 周裕琹 |
| 14 | 12/14 | Genes and cancer  | Ch12           | 周裕琹 |
| 15 | 12/21 | Genetic technology & Social genetics                    | Ch 13, 14      | 周裕琹 |
| 16 | 12/28 | Genomes and Genomics & Genetic testing and gene therapy | Ch 15, Ch 16   | 周裕琹 |
| 17 | 1/4   | Immunogenetics  | Ch 17          | 周裕琹 |
| 18 | 1/11  | 期末考試  | Ch 8-17        | 周裕琹 |

#### 四、計分方式

期中考（45%）

期末考（45%）

上課表現（10%）